

ABSTRACT OF THE DISCLOSURE

5 Krypton and/or xenon is separated crudely from a mixture comprising oxygen and
at least one rare gas selected from the group consisting of krypton and xenon in a
process comprising feeding said mixture or a mixture derived therefrom to a rare gas
recovery system and separating said mixture feed in said rare gas recovery system into
rare gas-lean gaseous oxygen ("GOX") and rare gas-enriched product. The process is
10 characterized in that at least about 50 mol % of said mixture is fed to the rare gas
recovery system in the gaseous phase provided that, when said mixture feed is
separated by selective adsorption, the concentration of xenon in the mixture feed is no
greater than 50 times the concentration of xenon in air. One advantage of a preferred
embodiment of the present invention is that it can easily be retrofitted to existing pumped
15 LOX cycle ASUs.